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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,161	09/20/2005	Fulvio Costa	033965.007	5232

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ATLANTA, GA 30309-3592

EXAMINER

AUSTIN, AARON

ART UNIT	PAPER NUMBER
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1794

MAIL DATE	DELIVERY MODE
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01/24/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/550,161	<b>Applicant(s)</b> COSTA ET AL.	
	<b>Examiner</b> Aaron S. Austin	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 8-13 is/are pending in the application.
- 4a) Of the above claim(s) 2-5 and 10-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 8 and 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

Applicant's election without traverse of Group I, claim 1 in the reply filed on 6/28/07 is acknowledged.

Newly submitted claims 10-13 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: these claims are process claims relating to nonelected process claims in the response of 6/28/07. The claims lack unity of invention as evidenced by Nogues (WO 93/21120) and Lorenzo et al. (EP 0705797 A2), as set forth below, as they teach the common feature of an optical article comprising silicon and having complete isotropy wherein dimensions are equal to or lower than 500 microns is known in the art.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 10-13 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Regarding claims 8-9, these claims are article claims directly related to the elected claim in the response of 6/28/07. As such, these claims are examined below.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 8-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 8-9, "dimensions equal to or lower than 500 microns" are claimed without defining the dimensions in relation to the article itself. It is unclear as to whether the claimed "dimensions" relate to a width, height, length, or circumference of the article as a whole or other formation on the article itself.

Regarding claim 8, lines 5 and 19 refer to "the desired or suitable step" and "a desired miniaturized dimension" without defining how that step is determined as the desired outcome is not specified. It is not clear to one of ordinary skill in the art where in the cascade the steps should be stopped.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 8-9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nogues (WO 93/21120).

Nogues teaches an optical article including hyperfine features below 500 microns in at least one dimension. The sol-gel glass forming the article may be produced from silicate compositions (including pure silica), optionally with the addition of other oxides (page 5, lines 24-25).

Nogues does not appear to identify the article as having an almost complete isotropy. However, as like materials are used in a like manner to that taught by applicant, the article taught by Nogues is expected to have the characteristics claimed.

In the alternative, it would have been obvious to one of ordinary skill in the art to form the article of Nogues having almost complete isotropy as this results in an optical article having a refractive index that does not vary with crystallographic direction. This is particularly advantageous in the field of optics as retardation of transmitted light is prevented leading to greater versatility of the article. If the term "complete isotropy" is directed to the physical dimensions of the article (see the 112 rejection above), it would further be obvious to form the article in the necessary dimensions for the intended use as like materials are used in a like manner, namely optical applications.

Regarding claim 8, the claim defines a product by process. The above arguments establish a rationale tending to show the claimed product is the same as what is taught by the prior art. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a

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different process.” *In re Thorpe*, 227 USPQ 964,966. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983), MPEP 2113.

Regarding claim 9, the silicon oxide is pure and the isotropy is essentially complete.

Claims 1 and 8-9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Lorenzo et al. (EP 0705797 A2).

Lorenzo teaches an optical article of final or nearly final dimensions comprising silicon oxide and/or other mixed oxides. The article has a roughness of less than 0.1 micrometers (Example 2), and thus dimensions of equal or less than 500 micrometers. Further, as like materials are used in a like manner to those claimed, the article is expected to have complete isotropy.

In an alternative interpretation, Lorenzo does not stipulate the article is has almost complete isotropy, however it would be obvious to one of ordinary skill in the art to form the article having nearly complete isotropy as this would lead to a more complete isotropic dimensional reduction as taught is desirable by the reference.

Regarding claim 8, the claim defines a product by process. The above arguments establish a rationale tending to show the claimed product is the same as

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what is taught by the prior art. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 227 USPQ 964,966. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983), MPEP 2113.

Regarding claim 9, the silicon oxide is pure and the isotropy is essentially complete.

### ***Response to Arguments***

Applicant's arguments, see the Remarks, filed 11/9/07, with respect to objection to the specification have been fully considered and are persuasive. The objection has been withdrawn.

Applicant's further arguments have been fully considered but they are not persuasive.

With respect to new claim 8, Applicant argues this is a product by process claim that serves as a "linking" claim. The suggestion is that unity of invention is present between the claims and as such the nonelected method claims should be examined with the elected product claims. However, The claims lack unity of invention as evidenced by Nogues (WO 93/21120) and Lorenzo et al. (EP 0705797 A2), as set forth above, as they teach the common feature of an optical article comprising silicon and having complete isotropy wherein dimensions are equal to or lower than 500 microns is known in the art.

With respect to the rejection under 35 USC 112, the amendment to define the dimensions as "dimensions of the article" fails to overcome the rejection. In particular, it is not clear as to what dimension is being defined (e.g., height, width, length circumference, etc. of the entire article or a feature on the article).

With respect to the Nogues reference, Applicant attempts to differentiate the claimed product from that described by Nogues by pointing to the differences in the processes of making the claimed article versus that taught by Nogues. With respect to claims 1 and 9, this argument is not commensurate with the claims as these claims do not include process language. With respect to claim 8, a product by process claim, the arguments fail to provide evidence establishing an unobvious difference between the claimed *product* and the prior art *product*. As the product taught by Nogues and that claimed have the same features as claimed, the arguments are not convincing.

With respect to the Lorenzo reference, Applicant argues Lorenzo does not disclose dimensions within the limitations claimed. However, Lorenzo teaches an article



having a roughness of less than 0.1 micrometers (Example 2), and thus dimensions of equal or less than 500 micrometers.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron S. Austin whose telephone number is (571) 272-8935. The examiner can normally be reached on Monday-Friday: 7:30 AM to 4:00 PM.

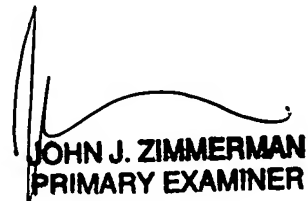
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



ASA



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